

ABSTRACT

An actuator as a drive source of robots and the like usable for housekeeping assistance, job assistance, and nursing help, in which a drive source itself is small-size, light-weighted, and flexible as well as safe, and a manufacturing method for a planar electrode support therefor are provided. The actuator has an electrolyte layer (4) in contact with a conductive polymer layer (3) disposed in between an electrode (1) having the conductive polymer layer attached thereto and an opposite electrode (2), for deforming the conductive polymer layer to be swelled and shrunken by application of electric fields to between both electrodes, in which the electrode having the conductive polymer layer attached thereto is a planar electrode which is patterned so that rigidity in a longitudinal direction that is an expansion and contraction direction of the conductive polymer layer is low.